Welcome and Introduction
Earth Observing Missions Applications Workshop

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Applied Sciences Program

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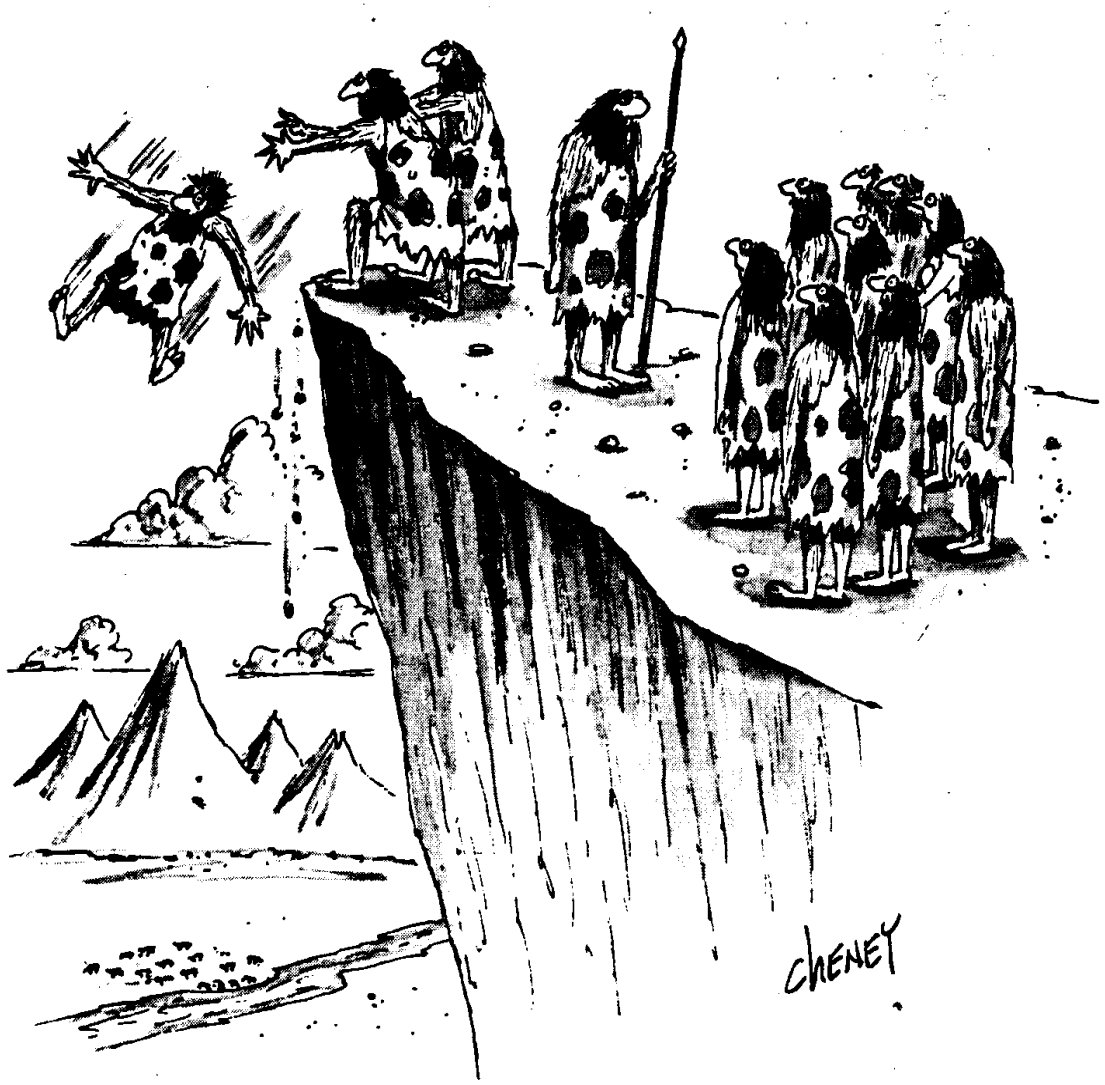
The aggressive pursuit of understanding Earth as a system – and the effective application of that knowledge for society's benefit – will increasingly distinguish those nations that achieve and sustain prosperity and security from those that do not.

Preliminary Report of Earth Science Decadal Survey
National Research Council, 2005



"So, does anyone else feel that their needs aren't being met?"

Applications-Mission Workshop

The *EOS* era demonstrated potential opportunities for direct, applied uses of the products across a spectrum of applications and operational users.

What lessons did we learn that we want to bring into the missions in formulation and Decadal Survey missions? What technical challenges should we anticipate to achieve applications benefits sooner for the nation?

We have an opportunity to engage the applications community early in the mission design and development processes, allowing for better preparation to manage the data from the missions, and to develop rapid and useful response products.

NASA and Earth Science

Earth Science Division

The NASA Earth Science Division supports research on the Earth system and its processes. Primary efforts are to characterize, understand, and improve predictions of the Earth system.

In the course of performing its research, NASA collects observations and generates new scientific knowledge that can be applied to meet organizations' decision-making activities.

Technology

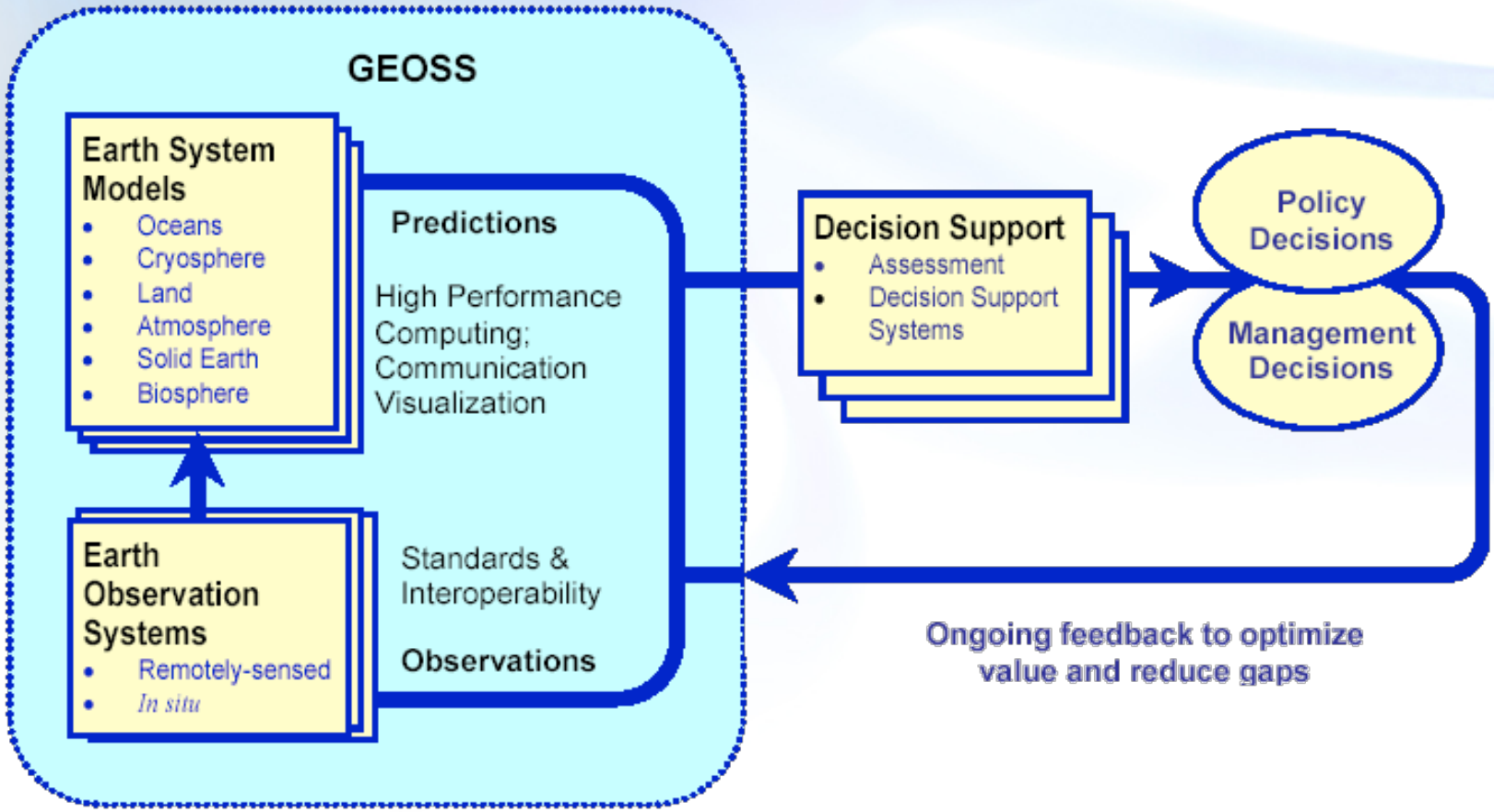
Missions

Research

Data Systems

Applications

Earth Science for Society



Applied Sciences Program

Program Strategy

Goal 1: Enhance Applications Research

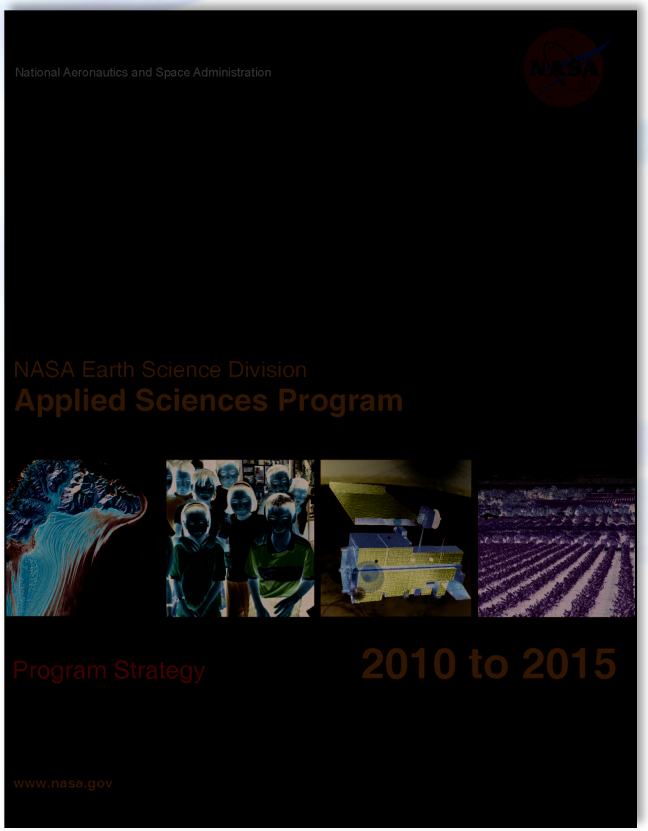
Advance the use of NASA Earth science in policy making, resource management and planning, and disaster response.

Goal 2: Increase Collaboration

Establish a flexible program structure to meet diverse partner needs and applications objectives.

Goal 3: Accelerate Applications

Ensure that NASA's flight missions plan for and support applications goals in conjunction with their science goals, starting with mission planning and extending through the mission life cycle.



Applied Sciences Program

Program Approach

The Applied Sciences Program funds projects that enable innovative uses of NASA Earth science data in organizations' policy, business, and management decisions.

Applications Areas

The program focuses on economic, health, resource management, and other themes to support both applications knowledge and projects targeted at integrating Earth observations in specific decision-making activities.

Capacity Building & Initiatives

The program sponsors specific activities to build skills and capabilities in the US and developing countries on how to access and apply environmental satellite data to benefit society.

- DEVELOP
- SERVIR
- Gulf of Mexico Initiative
- Training Modules

Earth Science Senior Review

National Interests Panel

2009 Senior Review: National Interests Panel

The National Interests panel assessed the contributions of the missions, sensors, and core data products to national objectives

Panel to convey the value of the missions and data sets for “applied and operational uses” that serve national interests, including:

operational uses, public services, business and economic uses, military operations, government management, policy making, non-governmental organizations’ uses, etc.

Panelists: FAA, USDA, NOAA, DOD (NRL, AFW), DHS, ASPRS, CI, NSGIC, AIAA
Observers: USGS, NGA, NRO

Earth Science Senior Review

2009 National Interests Panel

Overall Recommendations from National Interests Panel *		
Rating	**Definition**	**Missions**
Very High Utility	These missions have one or more very relevant and highly valued data products which are routinely used by one or more of the participating organizations for important activities. Loss of the data product(s) would have a significant negative impact on national on national agencies and organizations.	***Aqua, Terra, QuikSCAT, TRMM, Jason-1, GRACE***
High Utility	These missions have one or more data products which are routinely used by one or more of the participating organizations for their activities. Loss of the data product(s) would have a measurable negative impact on national agencies and organizations.	***Aura, CloudSat, SORCE***
Some Utility	These missions have one or more data products which are used by one or more of the participating organizations. Loss of the data product(s) would have a small but measurable negative impact on national agencies and organizations.	***EO-1, CALIPSO, ICESat, ACRIMSAT***
Not Applicable	These missions had no identified or significant applied or operational utility to the participating organzations. Loss of the data product(s) would have no or neglible negative impact on national agencies and organizations.	***None***

** Note: These are the initial findings and recommendations. The full report will explain the rationale for the ratings, including any caveats to these recommendations.*

Applications-Mission Workshop

What communities have we engaged and which communities should we engage?

What are some best practices in engaging & interfacing with the applications' communities in mission development?

In addition to how the users can benefit, what can the applications community provide? What feedback can they provide and how to facilitate that? What are their roles and responsibilities?

This workshop is considered the first in a series of dialogues to maximize the return and minimize the cost of future missions for our national interest.

Science, technology and innovation proceed more rapidly and more cost-effectively when insights, costs and risks are shared.

President Obama
National Academy of Sciences
27-April-2009